winter 2013 southeast

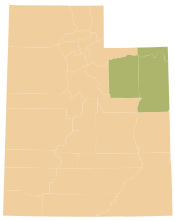
localinsights

An economic and labor market analysis of the Southeast Utah Area

vol. 2 issue 3 • jobs.utah.gov

in this issue:

Occupational Employment Outlook for Eastern Utah



BY ERIC MARTINSON, ECONOMIST

The United States Department of Labor allots a substantial amount in funding to each state in the country with the aim to promote an increase in employment and sustainable economic development. These grants are known as Workforce Information Grants to States (WIGS). Part of these grant monies are disbursed to the Workforce Research and Analysis Division of the Department of Workforce Services, which is responsible for five key conditions that help to accomplish the main objective of the WIGS. One of these key conditions, or deliverables, is to produce and disseminate state and sub-state industry and occupational employment projections. For the sake of comparability, each state uses standard methodology, software tools and guidelines in order to estimate these employment projections. According to a rigid timetable that the states follow in order to disseminate these projections, long-term (10-year) occupational projections are estimated and released every two years.

Long-term occupational projections allow employment counselors to communicate to our future workforce (typically youth still preparing themselves in school) a sense of which occupations are estimated to have abundant prospective employment opportunities. Projections can also direct the education community in shaping policies and programs aimed at preparing the future workforce with the skills necessary and valued in order to meet the future employment demands. Ultimately, the long-term employment projections provide a measure that individuals as well as organizations can use to plan ahead.

The long-term occupational projections are provided for eight sub-state regions and Metropolitan Statistical Areas (MSAs): Bear River, Central Utah, Eastern Utah, Ogden-Clearfield MSA, Provo-Orem MSA, Salt Lake City MSA, Southwest Utah and Washington County. Eastern Utah is comprised of Carbon, Daggett, Duchesne, Emery, Grand, San Juan, Uintah and Wasatch counties.

Major Occupational Groups

Occupations are classified according to the Occupational Employment Statistics program and can be categorized into 22 different major occupational groups. Each group represents even smaller subsets of occupational groups (e.g., construction and extraction occupations, sales occupations, etc.), with the most granular of occupational classification

Occupational Employment Outlook Continued

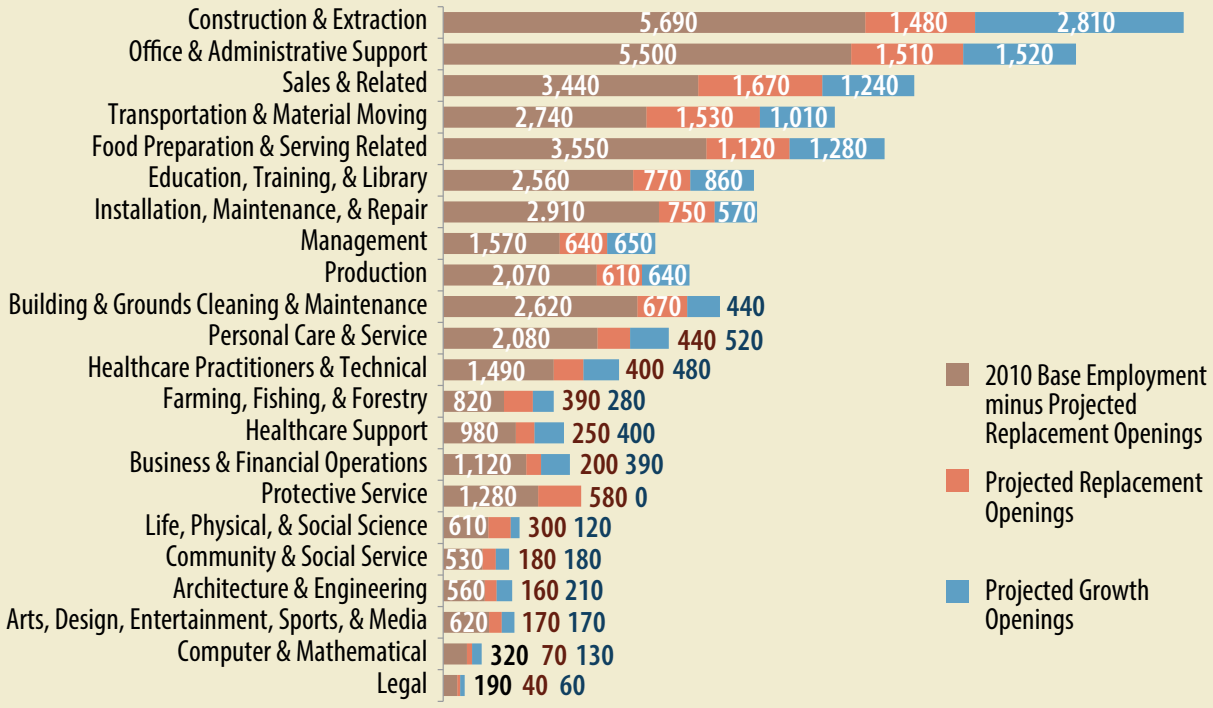
being specific occupations. For example, the occupation of derrick operators for oil and gas is a specific occupation within the construction and extraction major occupational group. A look at 2010 base occupational employment estimates and the projected employment growth by major occupational group provides some hints about the make-up of the eastern region's labor market.

When the occupational projections are estimated, two aspects are considered. The first is number of replacements within an existing employment base will be needed to account for those leaving a particular occupation. An airline pilot who retires, a waitress who decides to switch occupations to become an accountant or a worker who simply leaves the workforce illustrate a few examples of the need to replace positions within an occupation as vacancies are created. The other aspect of projection estimates are new openings. These new openings are either newly created positions in new businesses or operations or they can be net additions to existing operations.

Figure 1 illustrates major occupational groups ranked according to employment count estimates. They are ranked by the total projected openings estimated in 2020; the light red (projected employment replacements) and blue (new openings) bars together represent total projected openings. Since the forth-coming replacement openings will replace workers in the existing 2010 employment base, the darker and lighter red stacked bars compose the base employment estimates in 2010. This reveals the occupations in eastern Utah will have more (or less) demand for workers by 2020, both in terms of replacements of the 2010 employment base as well as any growth estimated to occur within these groups over ten years.

We see in Figure 1 that the largest number of projected openings in eastern Utah in the long-term is in the construction and extraction group of occupations. This trend is driven by the oil and gas extraction industries of the Uintah Basin region. If growth continues even in moderate levels, then this occupation will easily see the greatest overall employment growth, with 1,480 employment replacements needed and 2,810 new employment positions created by 2020. In fact, while construction and extraction-related jobs accounted for 12.5 percent of all jobs in the region in 2010, this share

Figure 1: Projected Employment Growth by Major Occupational Group 2020



Source: Utah Department of Workforce Services; U.S. Bureau of Labor Statistics

of laborers should increase its share of the workforce to 17.4 percent by 2020.

Another occupational group to show growth is transportation and material moving. though this occupational group includes the transportation of various cargo, this expansion is largely generated by needs for the movement of extracted crude oil to refineries throughout the state, which is subsequently transported as gasoline and other energy products. The other occupational groups with high employment demand over time are those which naturally support an increasing population in eastern Utah over the long-term. These include office and administrative support, sales, food preparation and serving, and education occupations. An accompanying table (Figure 2) has been provided to offer more details on future employment demand within major occupational groups.

Specific Occupations

Given that the eastern region has such a large oil and gas workforce, it should be no surprise that this should continue to be the case in the long term. As a matter of fact, the five specific occupations with the highest rate of estimated growth from 2010 to 2020 (occupations with a 2010 employment base of at least 100 jobs) are directly related to oil and gas extraction. Given the steady increase of the price of crude oil over the last two decades, it is reasonable to assume that this trend will continue to drive oil exploration and production efforts over the next ten years. derrick operators – at the top of the list – is projected to grow by 64 percent between 2010 and 2020. Median hourly wages for this occupation were $21.40 in 2010. This is an occupation which does not require high levels of education. In fact, four top-ranking growth occupations all have a median hourly wage ranging from $17.40 and $25.40, and likewise do not require high levels of education as a condition for entry into the labor force.

Other occupations predicted to be in relatively high demand include cement

Figure 2: Major Occupation Group, Descending Order by 2010 Employment Estimate

Major Occupational Group	Percent of Total Occupational Employment	Employment Estimates, 2010	Employment Estimates, Projected, 2020	Annual Growth Rate	Annual Openings, Total
Construction and Extraction	12.5%	7,180	9,990	3.9%	430
Office and Administrative Support	12.3%	7,030	8,530	2.1%	300
Sales and Related	8.9%	5,110	6,350	2.4%	290
Transportation and Material Moving	8.2%	4,690	5,950	2.7%	240
Food Preparation and Serving Related	7.5%	4,270	5,280	2.4%	250
Education, Training, and Library	6.4%	3,660	4,230	1.6%	130
Installation, Maintenance, and Repair	5.8%	3,330	4,190	2.6%	160
Management	5.8%	3,300	3,730	1.3%	110
Production	4.7%	2,700	3,320	2.3%	130
Building and Grounds Cleaning and Maintenance	4.4%	2,520	3,040	2.0%	100
Personal Care and Service	3.9%	2,220	2,860	2.9%	130
Farming, Fishing, and Forestry	3.3%	1,910	1,860	-0.2%	60
Healthcare Practitioners and Technical	3.3%	1,890	2,370	2.5%	90
Healthcare Support	2.3%	1,320	1,710	3.0%	60
Business and Financial Operations	2.1%	1,230	1,630	3.2%	70
Protective Service	2.1%	1,220	1,490	2.3%	70
Life, Physical, and Social Science	1.6%	910	1,030	1.3%	40
Community and Social Service	1.4%	780	960	2.2%	30
Architecture and Engineering	1.3%	720	920	2.8%	40
Arts, Design, Entertainment, Sports, and Media	1.2%	700	890	2.6%	40
Computer and Mathematical	0.7%	390	520	3.2%	20
Legal	0.4%	220	280	2.5%	10

Source: Utah Department of Workforce Services; U.S. Bureau of Labor Statistics

Figure 3: Twenty Occupations with the Highest Projected Growth in Employment from 2010 to 2020

SOC Title	Base Employment	Projection Employment	Numeric Change	Percent Change 2010–2020	Total Openings	Median Hourly Wages	Education Required
Derrick Operators, Oil and Gas	170	280	110	63.74	150	$21.40	Less than HS
Rotary Drill Operators, Oil and Gas	260	420	160	62.93	220	$25.40	Less than HS
Service Unit Operators, Oil, Gas, and Mining	340	550	210	60.35	280	$23.70	Less than HS
Wellhead Pumpers	160	250	90	59.24	140	$24.40	Less than HS
Roustabouts, Oil and Gas	1130	1,790	670	59.09	900	$17.40	Less than HS
Cement Masons and Concrete Finishers	150	210	70	44.59	90	$17.80	Less than HS
Industrial Machinery Mechanics	380	540	160	42.59	230	$25.00	HS diploma or equivalent
Operating Engineers and Other Construction Equipment Operators	640	900	260	39.88	410	$20.10	HS diploma or equivalent
Automotive Service Technicians and Mechanics	320	450	120	38.63	210	$17.80	HS diploma or equivalent
Medical Secretaries	120	160	40	36.75	60	$13.70	HS diploma or equivalent
First-Line Supervisors of Construction Trades and Extraction Workers	590	800	210	35.08	350	$29.40	HS diploma or equivalent
Emergency Medical Technicians and Paramedics	160	220	60	35	90	$14.50	Postsecondary non-degree award
Accountants and Auditors	480	640	170	34.45	270	$31.48	Bachelor's degree
Electricians	420	560	140	34.38	260	$25.20	HS diploma or equivalent
Civil Engineers	120	160	40	34.19	60	$34.00	Bachelor's degree
Management Analysts	110	150	40	33.94	60	$27.90	Bachelor's degree
Mobile Heavy Equipment Mechanics, Except Engines	230	310	80	33.48	140	$25.30	HS diploma or equivalent
Industrial Truck and Tractor Operators	170	220	60	33.13	100	$22.50	Less than HS
Recreation Workers	260	340	90	33.07	130	$9.80	Bachelor's degree
Childcare Workers	670	890	220	32.84	430	$9.20	HS diploma or equivalent

Source: Utah Department of Workforce Services; U.S. Bureau of Labor Statistics

Occupational Employment Outlook Continued

masons (44.6 percent growth over 10 years), operating engineers and other construction equipment operators (39.9 percent growth), automotive service technicians (38.6 percent growth), and medical secretaries (36.8 percent growth). With the exception of medical secretaries, the median hourly wages for these occupations is above the median hourly wage for the eastern region at $15.26. In fact, 16 of the 20 fastest growing occupations (with base employment of at least 100 jobs) currently pay above the median hourly wage.

Evaluating the occupational employment data by largest occupational employment base shows a broader mix of goods production and services labor (Figure 4). While oil and gas is still pronounced in this sorting, we also see population-supporting services like retail sales occupations, teachers and instructors, food preparation workers, secretaries, and waiters and waitresses. Many of these occupations pay at or below the region's median wages, while management occupations and occupations related to oil and gas extraction tend to offer close to or above median wages. Of the top twenty largest occupations by employment base, only Teacher and Instructor occupations require at least a bachelor's degree.

Educational Attainment

Occupational employment projections also include educational attainment required for a particular occupation or group of occupations. Figure 5 illustrates how occupations and occupational employment estimates are distributed among educational attainment requirements. The inner doughnut chart has occupations separated by educational requirements. As shown, by 2020 there will be 407 occupations (not jobs, but types of jobs) in eastern Utah which would typically require at most a high school diploma, which is equal to 57 percent of all occupations in the region. Eighty-two occupations (11 percent of occupations) will typically require at least an associate degree; 144 will require a bachelor's degree (20 percent of occupations); 86 (12 percent of occupations) will require an advanced degree (master's, doctoral or professional degree).

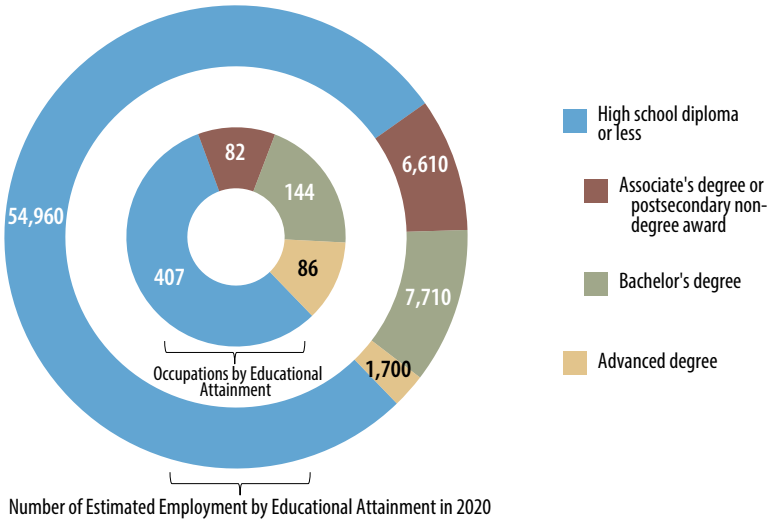
The outer doughnut chart in Figure 5 illustrates how the distribution of these educational attainment requirements will be allotted in terms of actual employment counts. The 407 occupations that will require at most a high school diploma will represent 54,960 jobs. This means that just over half of all occupations requiring at most a high

Figure 4: Twenty Occupations with the Highest Projected Employment from 2010 to 2020

SOC Title	Base Employment	Projection Employment	Numeric Change	Percent Change 2010 to 2020	Total Openings	Median Hourly Wages	Education Required
Heavy and Tractor-Trailer Truck Drivers	1,783	2,338	555	31.13%	910	$20.10	HS diploma or equivalent
Cashiers	1,697	2,074	377	22.22%	1,147	$9.20	Less than HS
Roustabouts, Oil and Gas	1,127	1,793	666	59.09%	904	$17.410	Less than HS
Retail Salespersons	1,369	1,718	349	25.49%	751	$11.40	Less than HS
Combined Food Preparation and Serving Workers, Including Fast Food	1,155	1,517	362	31.34%	684	$8.60	Less than HS
Teachers and Instructors, All Other	1,271	1,425	154	12.12%	348	$-	Bachelor's degree
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,227	1,416	189	15.4%	354	$14.8	HS diploma or equivalent
Construction Laborers	1,028	1,355	327	31.81%	409	$15.60	Less than HS
Maids and Housekeeping Cleaners	1,075	1,332	257	23.91%	438	$9.70	Less than HS
Office Clerks, General	1,018	1,318	300	29.47%	480	$11.00	HS diploma or equivalent
General and Operations Managers	1,035	1,206	171	16.52%	363	$34.00	Associate's degree
Waiters and Waitresses	842	1,026	184	21.85%	604	$9.00	Less than HS
Bookkeeping, Accounting, and Auditing Clerks	801	1,005	204	25.47%	292	$15.20	HS diploma or equivalent
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	792	915	123	15.53%	272	$10.00	Less than HS
Operating Engineers and Other Construction Equipment Operators	642	898	256	39.88%	405	$20.10	HS diploma or equivalent
Childcare Workers	673	894	221	32.84%	433	$9.20	HS diploma or equivalent
First-Line Supervisors of Construction Trades and Extraction Workers	593	801	208	35.08%	345	$29.40	HS diploma or equivalent
Maintenance and Repair Workers, General	637	792	155	24.33%	272	$14.80	HS diploma or equivalent
First-Line Supervisors of Retail Sales Workers	610	750	140	22.95%	282	$16.40	HS diploma or equivalent
Laborers and Freight, Stock, and Material Movers, Hand	586	713	127	21.67%	314	$13.40	Less than HS

school diploma will represent over 3 out every 4 jobs in the eastern region. This makes sense given the micro-economies in eastern Utah: oil and gas in the Uintah Basin, coal mining in Castle Country, and tourism and recreation in southeastern Utah. The major share of jobs in each of these industries typically does not require higher education. While 20 percent of all occupations in eastern Utah require at least a bachelor's degree, this represents just 11 percent of all jobs in the region.

Occupational employment projections encapsulate valuable information. This information allows for effective planning within labor market initiatives and education policy. Employment in eastern Utah will continue to highlight growth in occupations that support an ever-growing and broad demand for energy as well as occupations that support population growth.



Number of Estimated Employment by Educational Attainment in 2020

Source: Utah Department of Workforce Services; U.S. Bureau of Labor Statistics

Second Quarter Economic Indicators

for Castle Country and Southeastern Utah

BY ERIC MARTINSON, ECONOMIST

Castle Country

Total nonfarm payroll employment for the Castle Country region averaged 12,468 jobs for the second quarter of 2013, down 2 percent from the second quarter of 2012. This is the tenth consecutive quarter of year-over-year declines in total nonfarm employment for this region, which has been beset by a troubled coal mining outlook. This trend underscores the importance of coal mining in the region's overall labor market and economy. When coal mining struggles, it has an impact on the entire local economy.

Both the goods-producing and the services sectors suffered a shrinking workforce. The area felt its deepest losses in mining, which shed 96 jobs in the region on a year-over-year basis. transportation and warehousing was also responsible for more year-over job losses. Leisure and hospitality, on the other hand, added an average of 51 jobs compared to last year's first quarter, while health care added around 19 jobs.

Carbon County

As of June 2013, Carbon County year-over-year nonfarm payroll employment was down 5.5 percent, 512 jobs fewer than in June 2012. However, the greatest source for the year-over drop occurred in local government, where public schools let out relatively earlier than last year. This means that given this non-economic reason for the drop in employment for the county, the losses would have totaled to a 2.6 percent drop, instead of 5.5 percent, more in line with the year-over employment trends during April and May.

The mining job losses in Castle Country were concentrated mainly in Carbon County, which had 163 fewer second quarter jobs compared to last year. The administrative support, waste management and remediation services industry lost 41 jobs, a year-over-year decline of 9 percent. Leisure and hospitality, on the other hand, showed a boost of 47 second quarter jobs, year-over-year. A weekly average of 12 initial unemployment insurance claims were filed during the second

Second-Quarter Economic Indicators Continued

quarter of 2013, a slight improvement over last year. Most of the claims appeared from wholesale trade and administration, waste management and remediation services.

As of April 2013, total permitted dwelling units were down 67 percent compared to the same period of the previous year. Total permitted construction values were also down from January to April 2013 by 79 percent compared to the same period of last year.

The Utah State Tax Commission reported a five-percent decrease in year-over taxable sales for Carbon County during the second quarter of 2013. This is the fifth consecutive quarter the county has reported a year-over drop in quarterly taxable sales, another indicator of a struggling economy.

Emery County

Unlike Carbon County, Emery seems to have reversed its shrinking labor force economy. Total nonfarm payroll employment for Emery County in June 2013 was 3,520, a 4.3 percent increase, or 150 more jobs year-over-year. Averaging employment counts over the second quarter, total nonfarm employment was up 3.4 percent, marking the second consecutive quarter of employment growth in the county, which had been negative throughout 2011 and 2012. One source for the employment increase came from the Mining sector, where coal mining added around 100 jobs back into its work force. Construction added 80 jobs in June 2013, a 26-percent hike from last June.

A weekly average of 5 initial unemployment insurance claims were filed during the third quarter of 2013, not this low since before the Great Recession. Third quarter unemployment claims appeared primarily from construction and administration, waste management and remedial services.

Construction activity in Emery is on pace with last year's numbers. From January to April 2013, permitted dwelling units for the county are on par with last year's pace. Additionally, permitted construction values are well above last year's pace over the same time period. However, first quarter 2013 taxable sales for the county were down 88 percent compared to first quarter 2012. A

Figure 6: Total Nonfarm Payroll Employment, Carbon and Emery January 2001 to December 2014

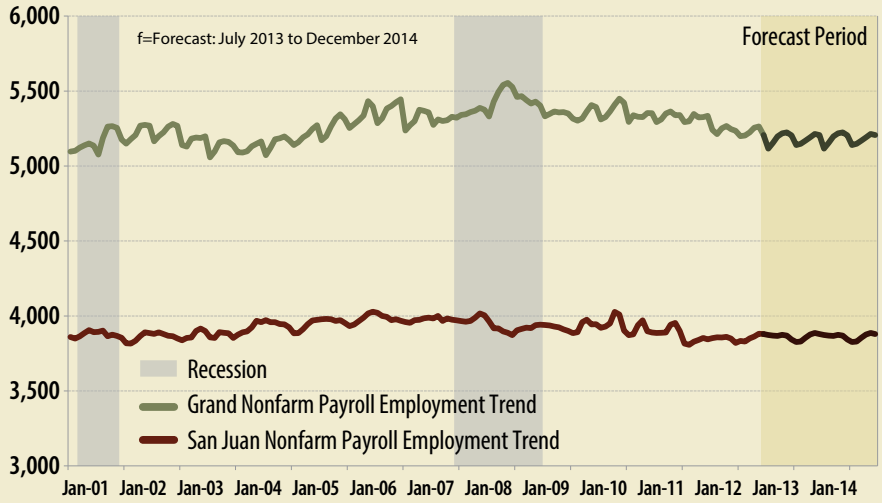
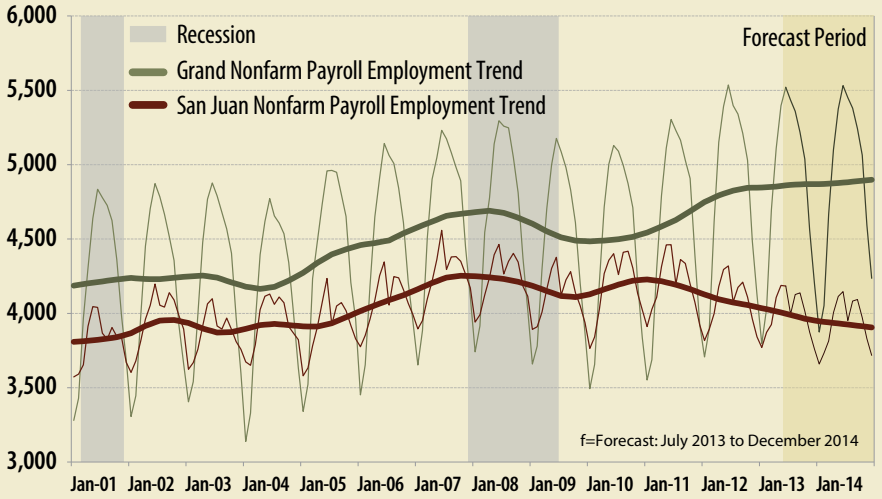


Figure 7: Total Nonfarm Payroll Employment, Grand and San Juan January 2001 to December 2014



deeper look into the data reveals that the drop in sales was due to large spending within utilities, construction and manufacturing made last year, likely related to a large construction or overhaul project at one of the electricity-generating plants in the county.

Southeast Utah

Total nonfarm payroll employment for the Southeastern region averaged 9,501 jobs for the second quarter of 2013, down 1 percent from second quarter 2012. Heavier job losses were felt in San Juan County, rather than Grand County which essentially broke even in terms of second employment growth. The mining and professional business services industries, which together netted a loss of 105 jobs and 112 jobs year-over-year, respectively, provided the main source for the drop in the Southeast region. Bright spots in the region's labor market appeared in manufacturing, health care and social services, and construction.

Grand County

Grand County's second quarter nonfarm payroll employment essentially stagnated. Leisure and Hospitality for the county were weak during April and May but surged 3 percent higher than June of 2012. Figure 8 provides a seasonal analysis of Grand County's Leisure and Hospitality industry. The summer month employment counts over the last five years are shown with forecast estimates up to December of 2014. Summer employment in leisure and hospitality has been expanding over the last several years, particularly between 2010 and 2012.

From January to April of this year, construction activity as tracked by the Bureau of Economic Research has been non-existent, with no new permitted dwelling construction. Average third-quarter weekly unemployment claims remain essentially unchanged from third quarters of the previous three years and close to pre-recession averages.

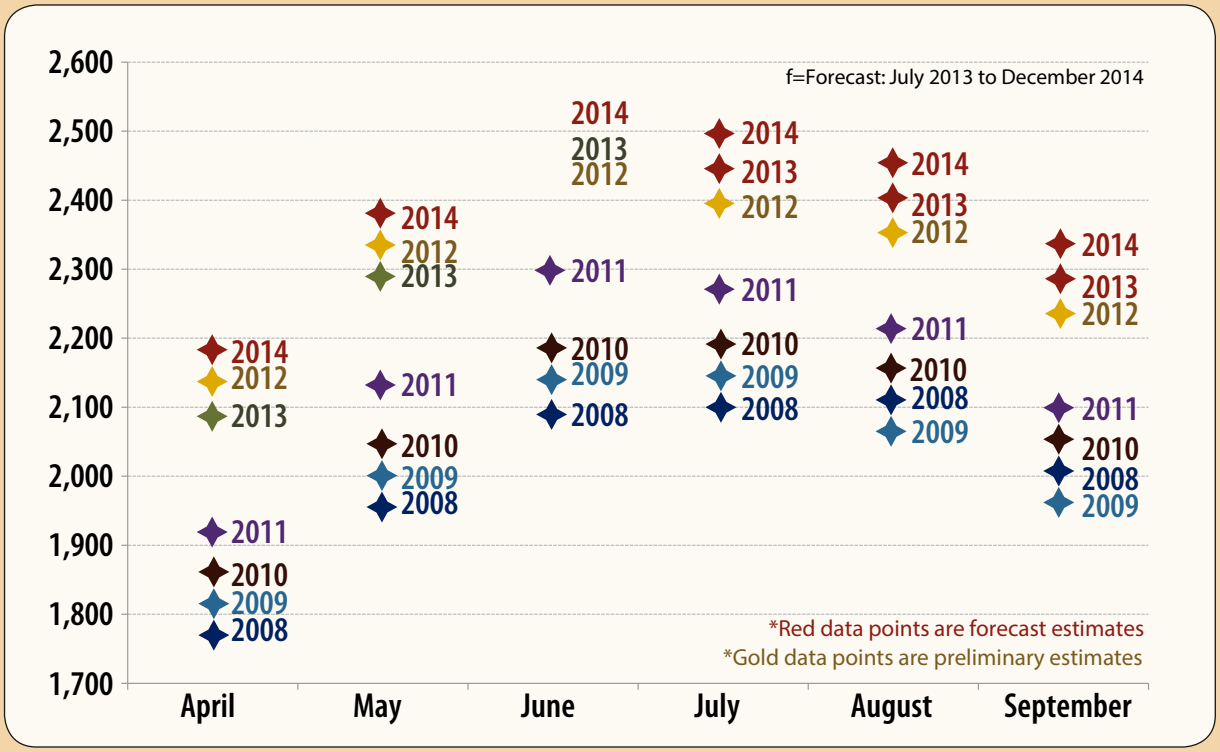
San Juan County

This June, San Juan County was 135 jobs shy of last June's total employment count, a drop of 3.1 percent. Professional and business services took the biggest hit as it lost 126 jobs compared to June 2012. Mining also tumbled, losing 77 jobs, a 17 percent drop year-over. Manufacturing saw a boost of 90 jobs in March, year-over-year, while education, health and social services also netted a gain of 78 jobs.

Permitted dwelling units from January to April 2013 show the county 25 percent behind last year's pace over the same period, and down 13 percent in total permitted construction values. On the other hand, taxable sales for the county were 47 percent higher during the first quarter of 2013 compared to last year. Large expenditures were made within mining, utilities and manufacturing during the first quarter of 2013 compared year-over-year.

Overall, the economic picture in the Castle Country and Southeast regions of the state are mixed. With coal mining activity struggling to make advances Carbon County has seen better economic days. However, Emery County - a county not unlike Carbon in its economic make-up - has experienced a positive first quarter this year in terms of employment. Tourism and recreation in Grand County continues to drive the Southeast's economy, despite some setbacks in San Juan County.

Figure 8: Grand County Summer Leisure and Hospitality Employment, 2008 to 2014 (f)



Workforce Services
Workforce Research and Analysis (WRA) Division
140 E. 300 S. • Salt Lake City, UT 84111
Equal Opportunity Employer/Programs

localinsights

Executive Director: Jon Pierpont

Director, WRA: Carrie Mayne

Supervising Economist: Mark Knold

Editor: Stacy Neal

Designer: Reason Robles

Economist: Eric Martinson
emartinson@utah.gov • 801-526-9404

To subscribe or request a copy, please call: 801-526-9785

jobs.utah.gov/wi/topjobs/

The Making of Occupational Projections

BY MELAUNI JENSEN, LMI ANALYST

Every state is required to produce projections by the Bureau of Labor Statistics (BLS), the source of national long-term industry and occupational projections. Every two years, the Department of Workforce Services (DWS) Economists offer long-term industry and occupational projections. The occupational projections discussed in this issue of Local Insights reveal trends for growth or decline of workers by occupational groups and specific occupations. The ten-year period provides guidance for the public to make more informed decisions about their long-term goals. The projections contain valuable information about the likely future number of job openings and wages.

As you may know, industries represent businesses providing or producing the same products or services, while occupations describe work that requires certain tasks, duties or responsibilities. Occupations are coded using the Standard Occupational Coding (SOC) system that contains standardized and occupation-specific descriptors, requirements and worker attributes. This system is used for the entire nation and helps to better identify the occupation a worker may be looking to obtain. These are also grouped with similar occupations with comparable duties, called occupational groups. Approximately 5,000 employers receive the annual Occupational Employment Statistics (OES) survey from DWS in Utah, making it the largest and best wage and occupational survey in the state. This survey provides data on occupational staffing patterns that are established and applied or distributed for most industries, giving the economists the data they need to develop employment estimates for roughly 700 identified occupations and are prepared at a statewide level and for eight sub-state areas.

The first step in developing occupational projections is to generate industry projections using the Long-Term Industry Projections System (LTIP) provided by BLS. DWS Economists produce employment estimates for about 95 different industries in the state. After producing industry projections, economists then create the occupational projections by analyzing the results from the OES survey. In addition to the employment estimates from the OES survey, the MicroMatrix software system used by all states generates estimates of the number of annual average job openings expected to occur during the projections period. Growth occurs when positions are created, while replacement happens when workers leave an occupation therefore needing to be replaced. The education, work experience or job training generally required for the occupations are also included in the occupational projections to provide even more information. These are provided by BLS and contain information about the typical education and training requirements for an occupation.

DWS Economists have used time-tested economic theory along with economic tools to provide occupational projections and do not promise 100 percent accuracy. They are made with the understanding that major events can happen with policies, demographic trends or even natural disasters to tip the trends of the economy. By using these resources to "tell the future", it provides more consistent and valid projections.